

***Reticulitermes lucifugus* (Isoptera, Rhinotermitidae),
a Pest of Wooden Structures, is Introduced into the
South American Continent**

by

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ABSTRACT

Reticulitermes Lucifugus was introduced in Uruguay and for the first time is found in South America. Attacks to wood in buildings and to paper are alarming authorities and researchers, since such severe damage to those materials was previously unknown in the country. Erradication of the pest is now impossible, and control strategies are being defined with the help of a multidisciplinary committee of specialists. As the termite increases its distribution range, perspectives for the future of wooden structure in Uruguay and the near countries of Argentina, Brazil and Paraguay become gloomy.

The first report on an unidentified species of *Heterotermes*, whose attacks to buildings have caused severe damage to structural wood and furniture in the city of Montevideo, Uruguay was published by Aber in 1989. Recently, one alcohol preserved sample, containing soldiers and workers of this termite, was received by Fontes for identification and he recognized it as a species of the genus *Reticulitermes*. Samples received subsequently included also the alate caste and made possible the tentative identification of the species as *R. lucifugus* (Rossi, 1792), a pest of wood in buildings distributed throughout Mediterranean Europe, North Africa, East Asia and in Madeira Island in the Atlantic Ocean (Edwards & Mill, 1986). Termites in other papers concerning this species previously designed *Heterotermes* sp. (Aber, 1990, 1992a, 1992b; Aber & Baillod, 1991) should now be assigned to *R. lucifugus*.

As far as it was possible to assess by means of a public inquiry (Fig. 1), infestations were first noticed in the year 1968 and became a social problem after 1976, in the district of Carrasco Norte. This district, now mainly residential, also harbors several important national and multinational manufacturers and factories and is in close vicinity to the international airport of Montevideo. Any of these could have been involved in an involuntary importation of the termite. The pest has since spread through several districts in the Department of Montevideo. In 1990 people were alarmed with infestations and swarms in

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INQUIRY ON TERMITE INFESTATION - 1989

IDENTIFICATION

SECTION NUMBER:

NAME:

ADDRESS:

PLEASE ANSWER THE FOLLOWING QUESTIONS

1. IS (OR WAS) YOUR HOUSE INFESTED BY TERMITES?
2. DO YOU KNOW OF ANY INFESTED HOUSE NEARBY?
3. WHEN DID YOU FIRST NOTICE INFESTATION (MONTH, YEAR)?
4. DID YOU EVER SEE FLYING SPECIMENS, OR JUST WALKING ONES?
5. WHEN DID YOU SEE FLYING SPECIMENS (MONTH, YEAR)?
6. MATERIALS ATTACKED (WOOD, PAPERS, CONCRETE WALLS).
7. HAVE YOU TRIED ANY CONTROL MEASURE? DESCRIBE IT.

OTHER COMMENTS:

TO DR. ANA ABER

Fig. 1. Inquiry on termite infestation, 1989, by Dr. Ana Aber. Analysis of written answers and interviews obtained with some confident ancient residents in the District of Carrasco Norte, Montevideo, enabled recognition of infestations in buildings since 1968 (translated into English).



Fig. 2. Door frame of a single-roofed elegant house, destroyed by *Reticulitermes lucifugus*. Playa Parque del Plata, Department of Canelones, December, 1992 (photo by L. R. Fontes).

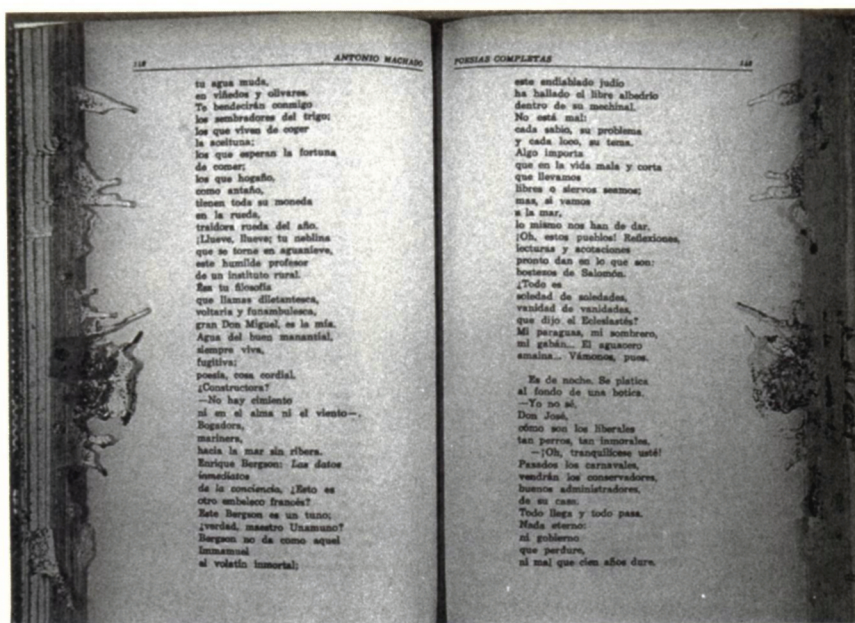


Fig. 3. Book injured by *Reticulitermes lucifugus*. Playa Parque del Plata, Department of Canelones, December of 1992 (photo by L. R. Fontes).

the neighboring Department of Canelones, whose coastal districts, east of Montevideo, are on the way to the tourist destination city of Punta del Este.

Colonies of *R. lucifugus* have been found not only inside houses, where they attack any kind of untreated wood and paper (Figs. 2 & 3). They are also very frequent in logs and standing dead trees in private and public gardens, from whence they reach buildings via subterranean galleries or by colonizing flying reproductives. Swarms start by the end of August and intensify, sometimes impressively, in the warmer days of December.

Ruffinelly & Carbonell stated in 1954 that (translated) "... several species (of termites) exist in the country, but fortunately none of economic importance, as they do not attack sound wood as in other countries". Now *Reticulitermes lucifugus* has been introduced and has definitely settled down in Uruguay, where it causes severe damage to buildings. In order to know the extent of the problem caused by the introduced termite and to discuss control strategies, an international meeting of the Mercosur (the community of countries comprising Uruguay, Argentina, Brazil and Paraguay), entitled "Primer encuentro de termitólogos del cono sur", was held in Montevideo, 10 to 11 of December, 1992. Authorities in the four countries of the community must be aware of the potential risk of the pest dissemination and of the need of energetic control measures to avoid it.

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REFERENCES

- Aber A., 1989. *Heterotermes* sp (Isoptera, Rhinotermitidae). Especie de termite plaga en Uruguay. Abstract, Actas de las II Jornadas de Zoología del Uruguay. Bol. Soc. Zool. Uruguay (2a. epoca) 5: 22-23
- Aber, A., 1990. Estudio sobre las construcciones de *Heterotermes* sp (Isoptera, Rhinotermitidae) plaga en la zona de Carrasco Norte, Montevideo, Uruguay. Revista bras. Ent. 34(3): 481-487
- Aber, A., 1992a. Termites en el area del Mercosur I. Revista Agropecuaria, n. 10, pp. 39-64
- Aber, A., 1992b. Estudios etologicos sobre *Heterotermes* sp y *Rugitermes* sp, dos termites (Isoptera) de importancia economica en la fauna del Uruguay. Abstract, p. 90, IV Congreso Nacional i Iberoamericano de Etologia, Caceres, Spain
- Aber, A. & G. Baillod, 1991. Termites in Uruguay; control, prevention and environment. The International Research Group on Wood Preservation, 22nd Annual Meeting, Kyoto, Japan, n. 1474, 11pp.
- Edwards, R. & A. E. Mill, 1986. Termites in Buildings. Their Biology and Control. Rentokill Ltd., England, 261 pp.
- Ruffinelly, A. & C.S. Carbonell, 1954. Segunda lista de insectos y otros artropodos de importancia economica en el Uruguay. Revta. Asoc. Ing. Agron., Montevideo, 94: 33-82

